

SERVICE
MANUAL

PM251

marantz®

model PM251

Stereo Amplifier

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound.

Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, correct part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA
HORNYPHON
Vertriebsgesellschaft GmbH
Wienerbergstrasse 1
A 1101 Wien
Austria
Telex: 132.332

AUSTRALIA
MARANTZ AUSTRALIA
PTY., Ltd.
19 Chard Road
Brookvale, NSW 2100
Australia
Telex: 24121

BELGIUM
SVD DIVISION MARANTZ
Industrielaan 1
1720 Groot-Bijgaarden
Belgium
Telex: 24466

CHILE
MARANTZ
DIVISION OF PHILIPS S.A.
AV. Santa Maria, 0760
Casilla 2687
Santiago
Telex: 240.239

DENMARK
MARANTZ
DIVISION OF PHILIPS
SERVICE A/S
Prags Boulevard 80
Postbox 1919
DK-2300 København S
Denmark
Telex: 31201

EIRE
MARANTZ IRELAND Ltd.
Newstead
Gionkeagh
Dublin 4
Telex: 25200

FINLAND
MARANTZ
DIVISION OF OY PHILIPS Ab
Kaivokatu 8
00100 Helsinki
Finland
Telex: 124811

FRANCE
MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

GERMANY
MARANTZ GERMANY GmbH
Max-Planck-Strasse 22
6072 Dreieich 1
Germany
Telex: 629821

THE NETHERLANDS
MARANTZ
De Limiet 3
4131 NR Vianen
The Netherlands
Telex: 47679

NORWAY
MARANTZ
DIVISION OF PHILIPS A/S
Sandstuveien 40
Oslo 6
Norway
Telex: 72640

GREAT BRITAIN
MARANTZ AUDIO U.K. Ltd
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Hammondsworth UB7 0LW
Great Britain
Telex: 935196

GREECE
ADAMCO S.A.
P.O.Box 21025
Hippocrates Street 188
Athens 11410
Greece
Telex: 216.795

ITALY
MARANTZ ITALIANA S.p.A.
Via Monte Napoleone 10
20121 Milano
Italia

JAPAN
MARANTZ JAPAN, Inc.
35-1, 7-chome, Sagami-cho
Sagamihara-shi, Kanagawa
Japan

KUWAIT
AL ALAMIAH ELECTRONICS
Ussama Building
Fahd al Saleem Street
P.O.Box 23781
Safat-Kuwait
Telex: 22694

SAUDI ARABIA
AL ALAMIAH ELECTRONICS
P.O.Box 5954
University Street
Riyadh 11432
Saudi Arabia
Telex: 201530

SOUTH AFRICA
MARANTZ
DIVISION OF PHILIPS S.A.
Rainer House
Ove Street, 10
Doomfontein
Johannesburg
Telex: 483.456

SPAIN
PHONO S.A.
Ignacio Iglesias 10
Badalona (Barcelona)
Spain
Telex: 59355

SWEDEN
MARANTZ
DIVISION OF PHILIPS
Försäljning AB
Tegeluddsvägen 1
S-115 84 Stockholm
Sweden
Telex: 14080

SWITZERLAND
DYNAVOX ELECTRONICS
Route de Villars 105
1701 Fribourg
Switzerland
Telex: 942377

TURKEY
DOGRUOL Ltd.
I.M.C.
6 Blok N°6310
Unkapani
Istanbul
Turkey
Telex: 22065

MALTA
CACHIA & GALEA
Republic Street, 68D
Valetta
Telex: 1682

U.S.A.
MARANTZ COMPANY, Inc.
National Service Department
P.O.Box 577
Chatsworth, CA 91311
U.S.A.

TECHNICAL ASSISTANCE

Should you require any other technical support, do not hesitate to contact the Technical Department of

MARANTZ EUROPE & Co.

Avenue Louise 326 - Bte. 32

B-1050 Brussels

Belgium

Telephone: (02) 6407830 (10 l)

Telex: 26602

Fax.: (02) 649.29.20

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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How to use this service manual

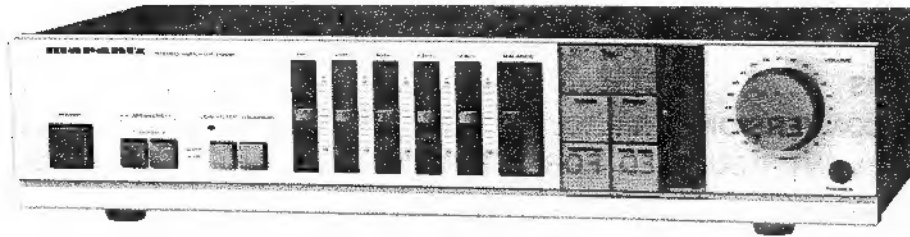
- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.
In case of ordering, please establish the parts number of 10 figures following the procedure mentioned in this service manual "How to establish the parts number for common parts".

(NOTE)

When you order parts to the Marantz parts center, please take notice of the following points.

- 1) Please correctly write the parts number of 10 figures following the rule.
- 2) Since ordering parts by the Ref. Desig. No. or ratings indicated in the schematic diagram does not satisfy the above conditions, the Marantz parts supply system does not work properly.
As this case is apt to cause a trouble, please pay attention to it.

MODEL PM251 STEREO AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM251 Stereo Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM251 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Main Amp. mounted on P.W. Board P701
2. Volume mounted on P.W. Board PE01
3. Speaker Switch mounted on P.W. Board PN01
4. Power Switch mounted on P.W. Board PP01
5. Headphone mounted on P.W. Board PW01
6. Speaker Lamp mounted on P.W. Board PX01

2. VOLTAGE CONVERSION

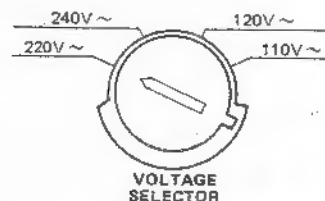
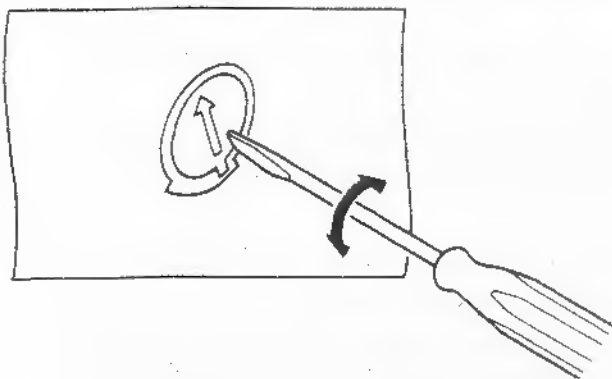
• EUROPEAN MODEL ONLY

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION

DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



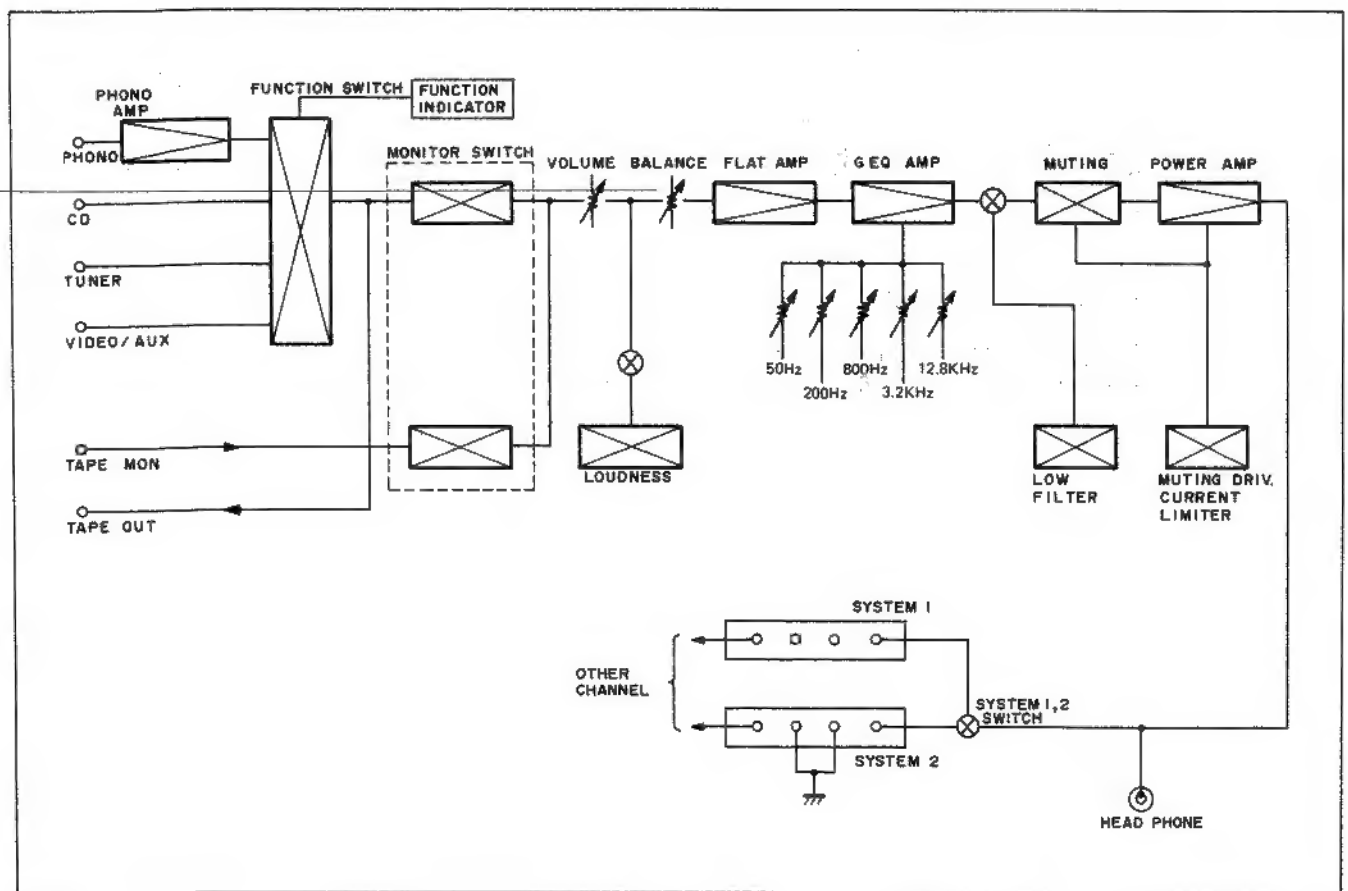
Note on safety: Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM251 Stereo Amplifier.

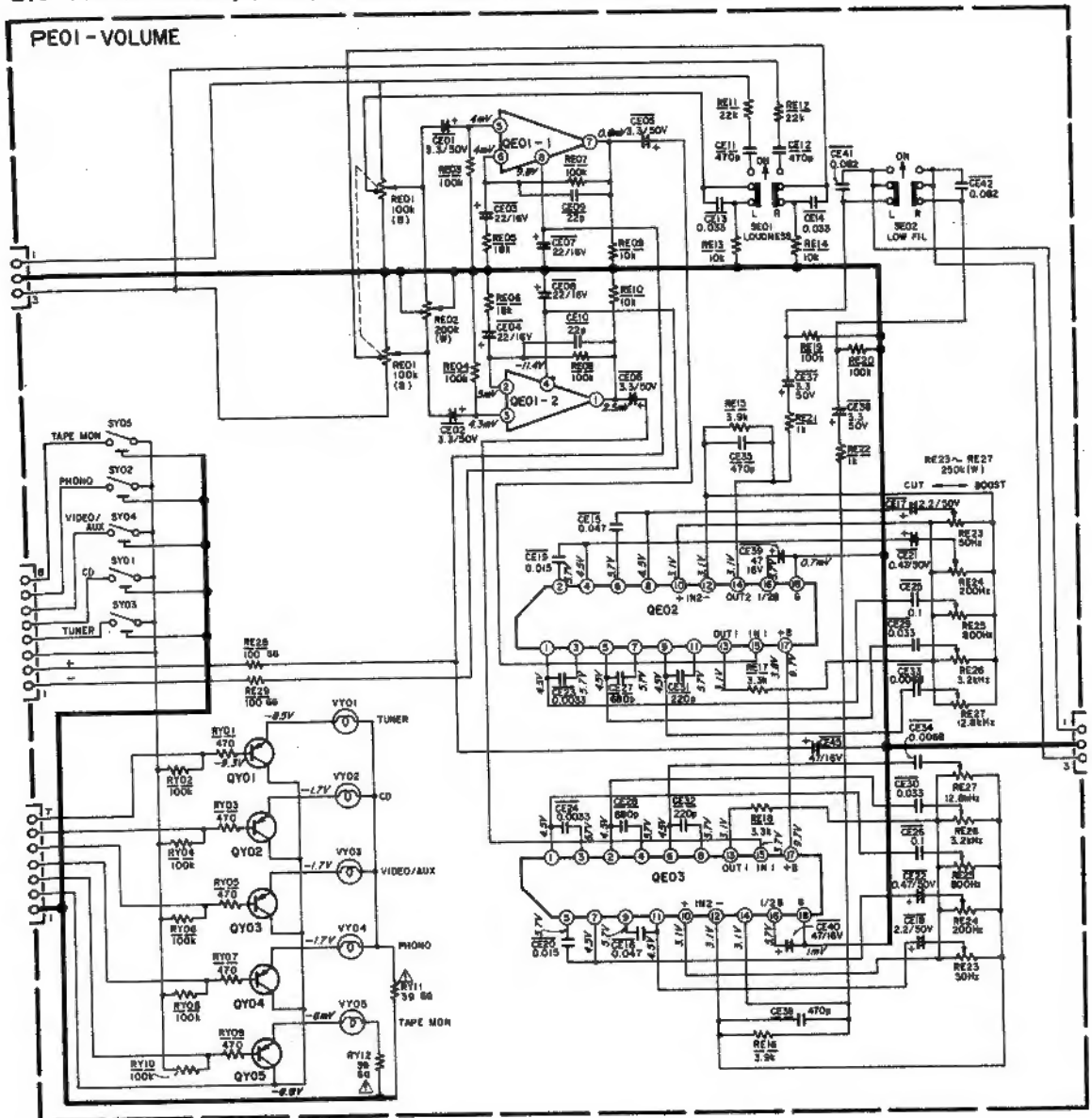
| Item | Use |
|---|--|
| Distortion Analyzer | Distortion measurements |
| Audio Oscillator | Sinewave and squarewave signal source |
| AC VTVM | Voltage measurements (AC) |
| Oscilloscope | Waveform analysis and trouble shooting and ASO alignment |
| Circuit Tester | Trouble shooting |
| DC VTVM | Voltage measurements (DC) |
| AC Wattmeter | Monitors primary power to amplifier |
| Line Voltmeter | Monitors potential of primary power to amplifier |
| Variable Autotransformer (0 ~ 140V AC, 10A) | Adjust level of primery power to amplifier |
| Shorting Plug | Shorts amplifier input to eliminate noise pickup |

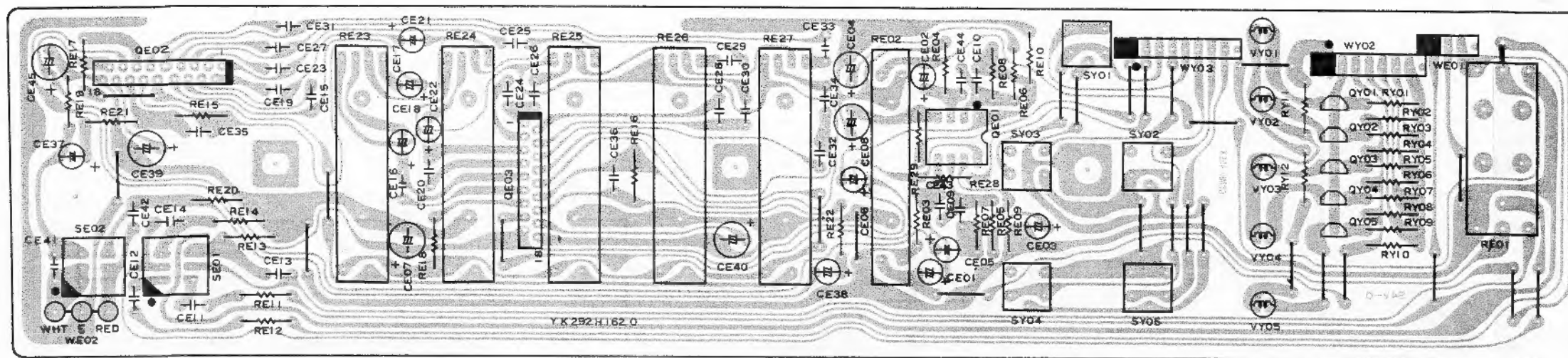
4. BLOCK DIAGRAM



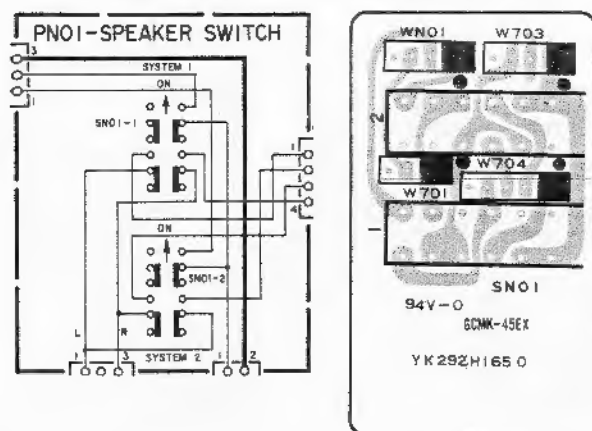
5. DIAGRAM AND COMPONENT LOCATIONS

5.1 Volume Assembly (PE01) Schematic Diagram and Component Locations

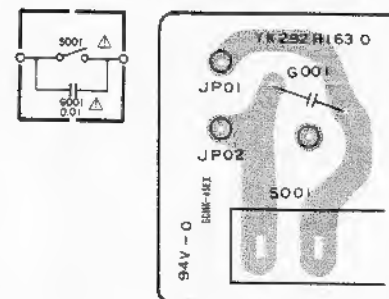




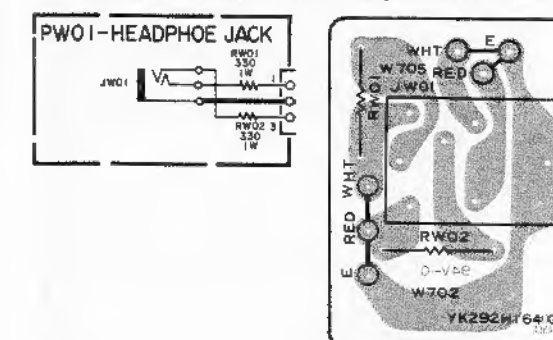
5.2 Speaker Switch Assembly (PN01)
Schematic Diagram and Component Locations



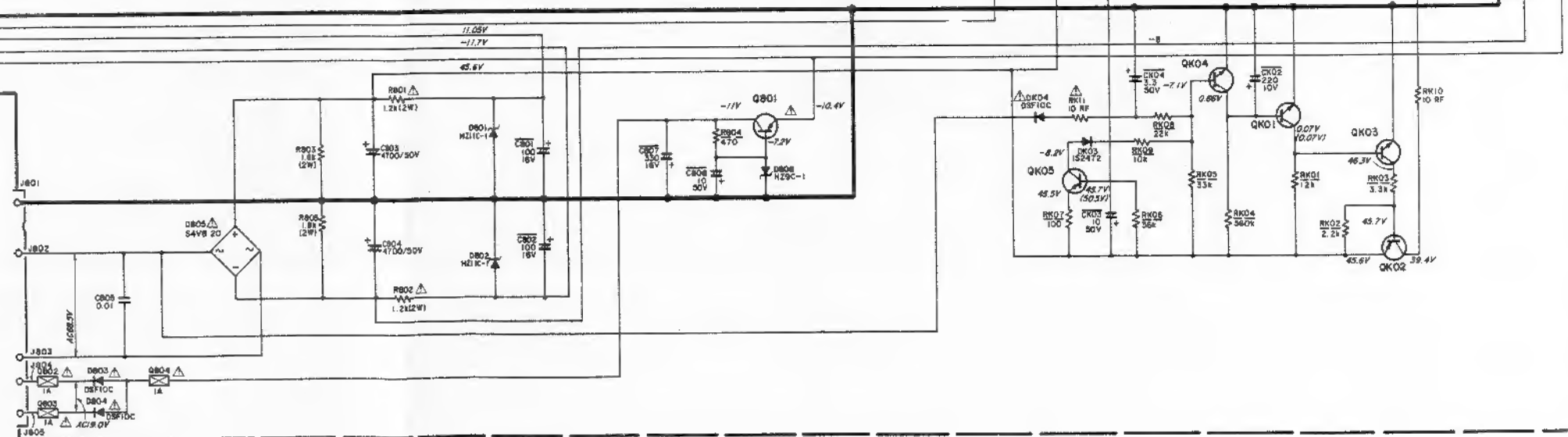
5.3 Power Switch Assembly (PP01)
Schematic Diagram and Component Locations

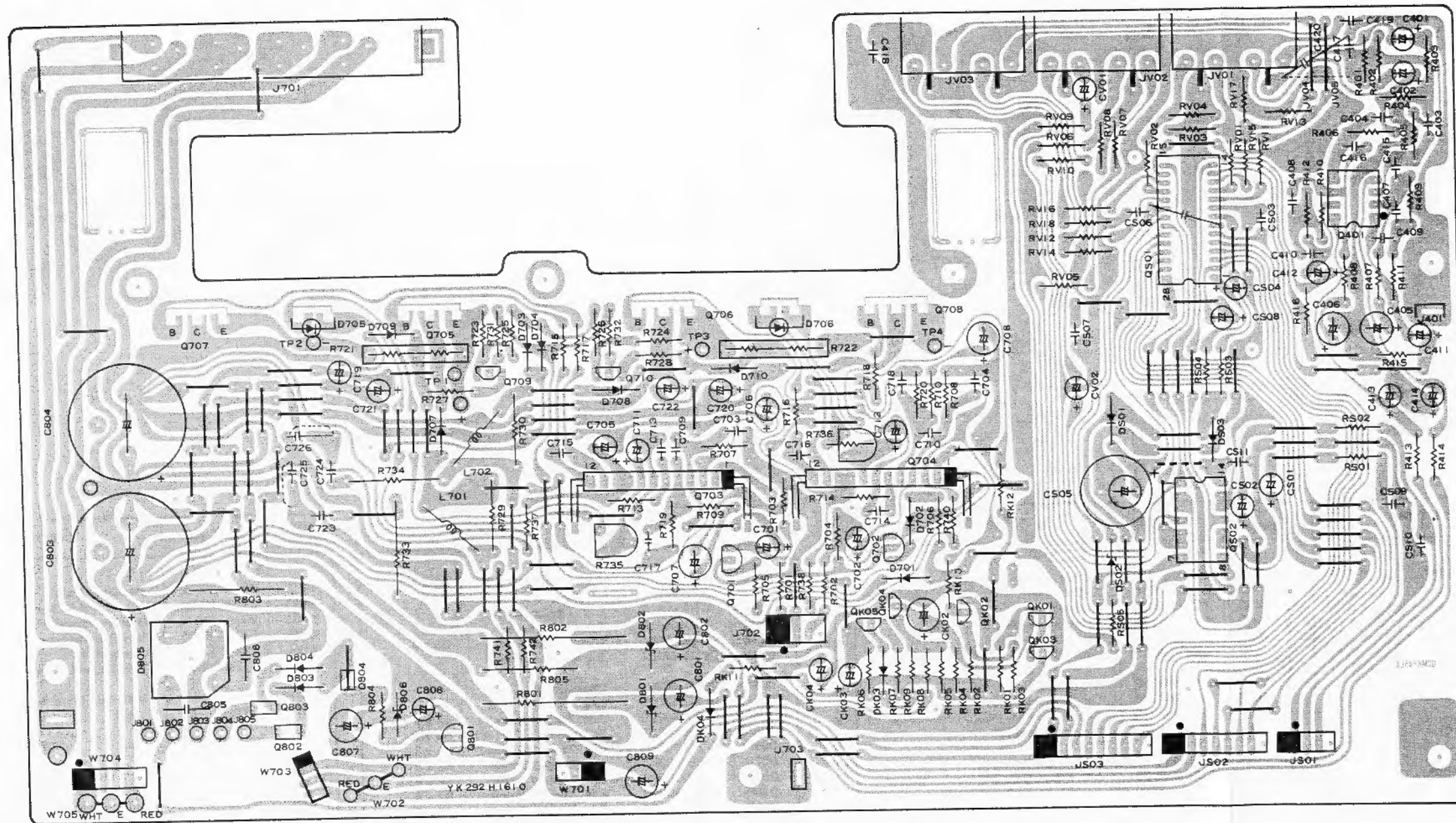


5.4 Headphone Jack Assembly (PW01)
Schematic Diagram and Component Locations



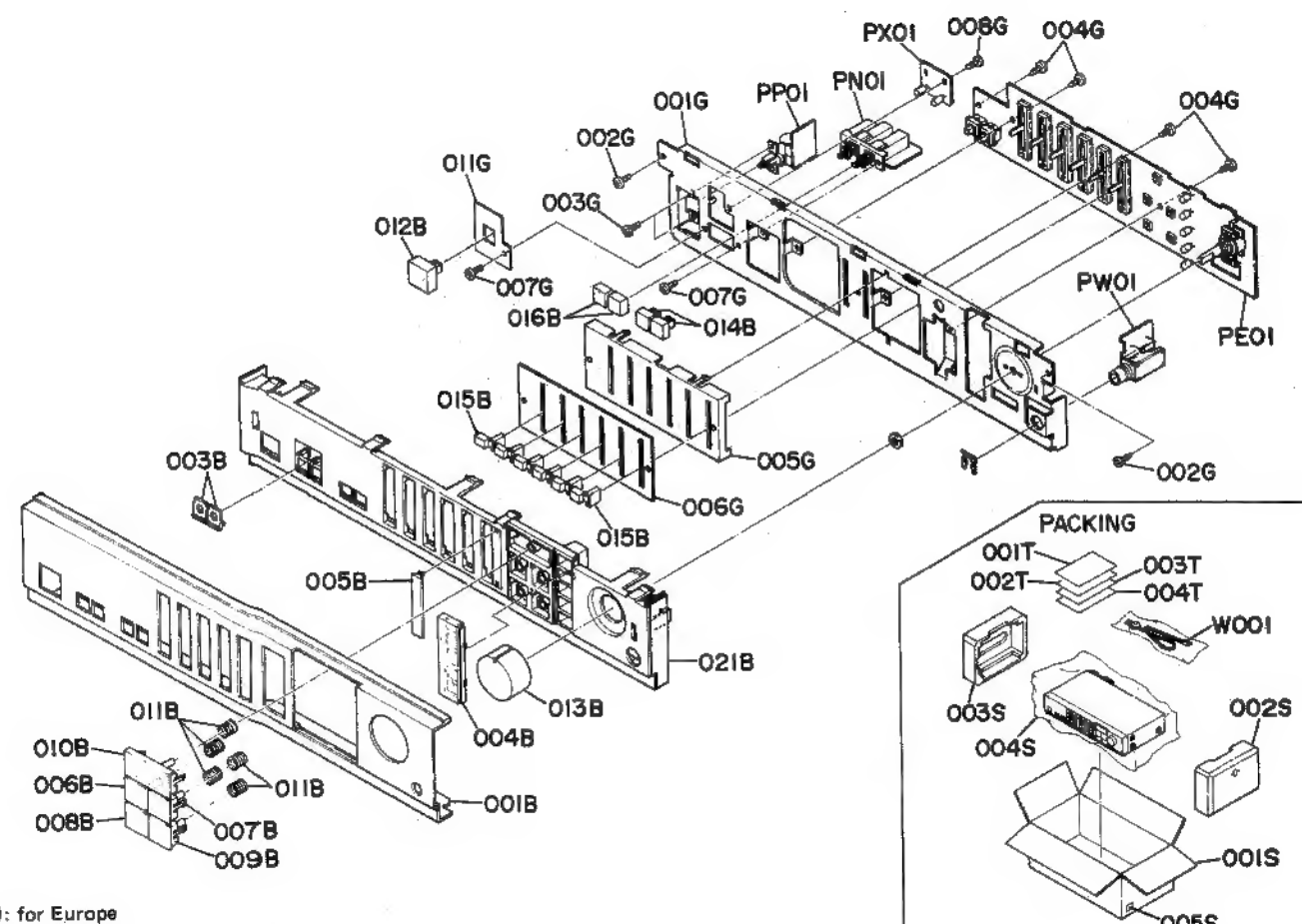
P701—MAIN AMP





M4287

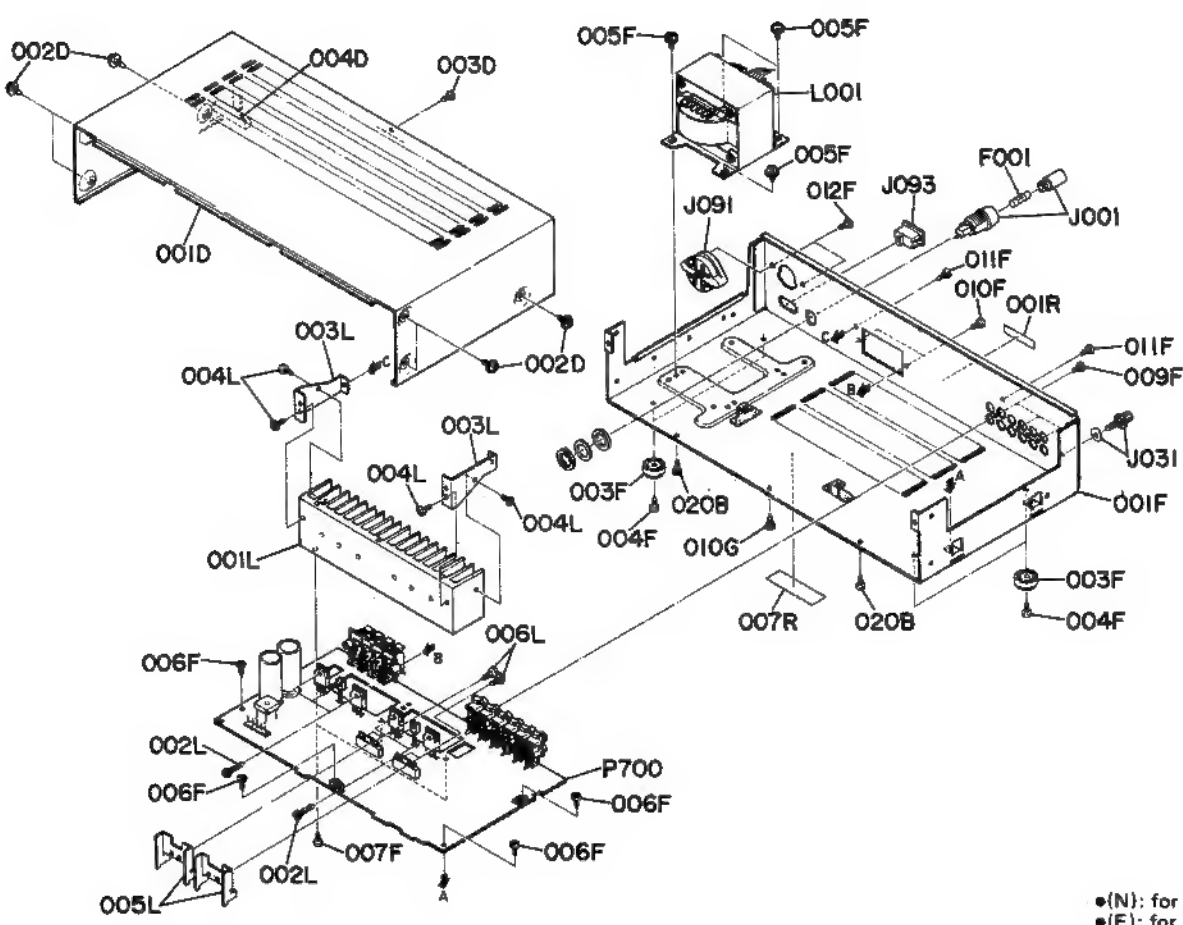
6. EXPLODED VIEW AND PARTS LIST



•(N): for Europe
•(E): for Europe
•(A): for Australia

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|------------|-----------------------------|
| A | 292H248400 | Front Panel Assembly |
| 001B | 292H248010 | Front Panel |
| 003B | 158T355010 | Lens, Speaker |
| 004B | 292H265010 | Indicator, Function |
| 005B | 261H265110 | Indicator, Balance |
| 006B | 261H270110 | Button, Tuner |
| 007B | 261H270120 | Button, Phone |
| 008B | 261H270130 | Button, Video/AUX |
| 009B | 261H270140 | Button, Tape Monitor |
| 010B | 261H270150 | Button, CD |
| 011B | 261H115010 | Spring, Button |
| 021B | 261H105510 | Chassis, Front; K |
| 012B | 158T270010 | Button, Power Switch |
| 013B | 261H154010 | Knob, Volume |
| 014B | 262H270020 | Button, Subsonic/Loudness |
| 015B | 261H154020 | Knob, Balance EQ |
| 016B | 242H270020 | Button, Speaker |
| 001G | 261H105010 | Chassis, Front |
| 002G | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 003G | 51100306A0 | B.H.M. Scree B3 x 6 |
| 004G | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 005G | 261H053010 | Cover, Tone |
| 006G | 292H265020 | Indicator, Tone |
| 007G | 51100306A0 | B.H.M. Screw B3 x 6 |
| 008G | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 011G | 261H120010 | Insulator, Power Switch [N] |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|------------|---------------------|
| 001S | 292H801010 | Packing Case |
| 002S | 261H809010 | Cushion, (R) |
| 003S | 261H809020 | Cushion, (L) |
| 004S | 9014326150 | Polyethylene Bag |
| 005S | 9526019060 | Serial No. Card [N] |
| | 9526019030 | Serial No. Card [A] |
| 001T | 292H851310 | User Manual |
| 002T | 292H851320 | User Manual, Spec |
| 003T | 292H856010 | Circuit Diagram [N] |
| 004T | 9631000090 | Warranty Card [A] |
| W001 | ZC01805010 | A.C. Power Cord [N] |
| W001 | ZC02006020 | A.C. Power Cord [A] |



7. ELECTRICAL PARTS LIST

•(N): for Europe
•(E): for Europe
•(A): for Australia

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R*:** (1) GD05 --- 140, Carbon film fixed resistor, $\pm 5\%$, 1/4W
R*:** (2) GD05 --- 180, Carbon film fixed resistor, $\pm 5\%$, 1/6W

① — Resistance value

Examples

① Resistance value

| | | | |
|---------------------|---------------------|----------------------|-----------------------|
| 0.1 Ω ...001 | 10 Ω ...100 | 1k Ω ...102 | 100k Ω ...104 |
| 0.5 Ω ...005 | 18 Ω ...180 | 2.7k Ω ...272 | 680k Ω ...684 |
| 1 Ω ...010 | 100 Ω ...101 | 10k Ω ...103 | 1Mk Ω ...105 |
| 6.8 Ω ...068 | 390 Ω ...391 | 22k Ω ...223 | 4.7Mk Ω ...475 |

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1 --- 370, Ceramic condenser
Disc type
Temp. coeff. P350 ~ N1000, 50V

① ②
Capacity value
Tolerance

Examples

① Tolerance (Capacity deviation)
 $\pm 0.25\mu\text{F}$...0
 $\pm 0.5\mu\text{F}$...1
 $\pm 5\%$...5

* Tolerance of COMMON PARTS handled here are as follows:

0.5pF ~ 5pF... $\pm 0.25\mu\text{F}$
6pF ~ 10pF... $\pm 0.5\mu\text{F}$
12pF ~ 560pF... $\pm 5\%$

② Capacity value

| | | |
|-------------|------------|-------------|
| 0.5pF...005 | 3pF...030 | 100pF...101 |
| 1pF...010 | 10pF...100 | 220pF...221 |
| 1.5pF...015 | 47pF...470 | 560pF...561 |

C***: CERAMIC CAP.

(1) DK16 --- 300, High dielectric constant ceramic condenser
Disc type
Temp. chara. 2B4, 50V

①
Capacity value

Example

② Capacity value
100pF...101 1000pF...102 10000pF...103
470pF...471 2200pF...222

C***: ELECTROLY CAP. ($\frac{\square}{\square}$), FILM CAP. ($\frac{\square}{\square}$)

(1) EA --- 10, Electrolytic condenser
One-way lead type, Tolerance $\pm 20\%$

① ②
Dielectric strength
Capacity value

Examples

① Capacity value
0.1 μF ...104 4.7 μF ...475 100 μF ...107
0.33 μF ...334 10 μF ...106 330 μF ...337
1 μF ...105 22 μF ...226 1100 μF ...108
2200 μF ...228

② Working voltage

| | |
|------------|-----------|
| 6.3V...006 | 25V...025 |
| 10V...010 | 35V...035 |
| 18V...018 | 50V...050 |

(2) DF15 --- 350, Plastic film condenser
One-way type, Mylar $\pm 5\%$ 50V

①
Capacity value

Examples

① Capacity value
0.001 μF (1000pF)...102 0.1 μF ...104
0.0018 μF ...182 0.56 μF ...564
0.01 μF ...103 1 μF ...105
0.015 μF ...153

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|--------------------------|---|
| P701 | YK292H1610 ZZ292H8610 | P701-MAIN AMP CIRCUIT BOARD P.W. Board, Main Amp P.W. Board Assembly |
| | | P701-CAPACITORS |
| C407 | DF16332350 | Film 3300pF $\pm 10\%$ |
| C408 | DF16332350 | Film 3300pF $\pm 10\%$ |
| C409 | DF16123350 | Film 0.012 μF $\pm 10\%$ |
| C410 | DF16123350 | Film 0.012 μF $\pm 10\%$ |
| C415 | DF16182350 | Film 1800pF $\pm 10\%$ |
| C416 | DF16182350 | Film 1800pF $\pm 10\%$ |
| C417 | DK18103310 | Ceramic 0.01 μF |
| C418 | DK18103310 | Ceramic 0.01 μF |
| C420 | DK18103310 | Ceramic 0.01 μF |
| C723 | DF16683350 | Film 0.068 μF $\pm 10\%$ |
| C724 | DF16683350 | Film 0.068 μF $\pm 10\%$ |
| C725 | DF16683350 | Film 0.068 μF $\pm 10\%$ |
| C726 | DF16683350 | Film 0.068 μF $\pm 10\%$ |
| C803 | EB47805010 | Elect 4700 μF 50V |
| C804 | EB47805010 | Elect 4700 μF 50V |
| C805 | DK18103560 | Ceramic 0.01 μF 500V |
| CS03 | DK18103310 | Ceramic 0.01 μF |
| CS06 | DK18103310 | Ceramic 0.01 μF |
| CS07 | DK18103310 | Ceramic 0.01 μF |
| CS11 | DK18103310 | Ceramic 0.01 μF |
| | | P701-RESISTORS |
| R715 | GG05047140 | 4.7 Ω $\pm 5\%$ 1/4W |
| R716 | GG05047140 | 4.7 Ω $\pm 5\%$ 1/4W |
| R717 | GG05047140 | 4.7 Ω $\pm 5\%$ 1/4W |
| R718 | GG05047140 | 4.7 Ω $\pm 5\%$ 1/4W |
| △ R721 | BW10000040 | 0.27 Ω 3W, Composit |
| △ R722 | BW10000040 | 0.27 Ω 3W, Composit |
| R729 | GA05047010 | 4.7 Ω $\pm 5\%$ 1W |
| R730 | GA05047010 | 4.7 Ω $\pm 5\%$ 1W |
| R733 | GA05100020 | 10 Ω $\pm 5\%$ 2W |
| R734 | GA05100020 | 10 Ω $\pm 5\%$ 2W |
| R735 | RA01010600 | 100 Ω (B), Trimming |
| R736 | RA01010600 | 100 Ω (B), Trimming |
| △ R737 | NH05100140 | 10 Ω $\pm 5\%$ 1/4W, Fusible |
| △ R738 | NH05100140 | 10 Ω $\pm 5\%$ 1/4W, Fusible |
| △ R801 | GA05122020 | 1.2K Ω $\pm 5\%$ 2W |
| △ R802 | GA05122020 | 1.2K Ω $\pm 5\%$ 2W |
| R803 | GA05182020 | 1.8K Ω $\pm 5\%$ 2W |
| R805 | GA05182020 | 1.8K Ω $\pm 5\%$ 2W |
| △ RK10 | NH05100140 | 10 Ω $\pm 5\%$ 1/4W, Fusible |
| △ RK11 | NH05100140 | 10 Ω $\pm 5\%$ 1/4W, Fusible |
| △ RK12 | NH05100140 | 10 Ω $\pm 5\%$ 1/4W, Fusible |
| | | P701-SEMICONDUCTORS |
| D701 | HD20001000 | Diode 1S1555 |
| D702 | HD20001000 | Diode 1S1555 |
| D703 | HD20001000 | Diode 1S1555 |
| D704 | HD20001000 | Diode 1S1555 |
| D705 | HV00009080 | Varistor STV3H(O, Y) |
| D706 | HV00009080 | Varistor STV3H(O, Y) |
| D707 | HD20022030 | Diode DSF10C |
| D708 | HD20022030 | Diode DSF10C |
| D709 | HD20022030 | Diode DSF10C |
| D710 | HD20022030 | Diode DSF10C |

•(N): for Europe
•(E): for Europe
•(A): for Australia

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|--------------------------|---|
| D801 | HD30038010 | Zener HZ11C1L |
| D802 | HD30038010 | Zener HZ11C1L |
| Δ D803 | HD20022030 | Diode DSF10C |
| Δ D804 | HD20022030 | Diode DSF10C |
| Δ D805 | HD20008290 | Diode S4VB20 |
| D806 | HD30045010 | Zener HZ9C1L |
| DK03 | HD20002210 | Diode 1S2472 |
| Δ DK04 | HD20022030 | Diode DSF10C |
| DS01 | HD20001000 | Diode 1S1555 |
| DS02 | HD30045010 | Zener HZ9C1L |
| DS03 | HD20001000 | Diode 1S1555 |
| Q401 | HC10008090 | IC 4558DD |
| Q701 | HT413022B0 | Transistor 2SD1302(S, T) |
| Q702 | HT413022B0 | Transistor 2SD1302(S, T) |
| Δ Q703 | HC10097060 | IC MPC1270H |
| Δ Q704 | HC10097060 | IC MPC1270H |
| Δ Q705 | HT331812A0 | Transistor 2SC3181(R, O) |
| Δ Q706 | HT331812A0 | Transistor 2SC3181(R, O) |
| Δ Q707 | HT112642A0 | Transistor 2SA1264(R, O) |
| Δ Q708 | HT112642A0 | Transistor 2SA1264(R, O) |
| Q709 | HT327851F0 | Transistor 2SC2785(J, H) |
| Q710 | HT327851F0 | Transistor 2SC2785(J, H) |
| Δ Q801 | HT206472F0 | Transistor 2SB647(C, D) |
| Δ Q802 | FU10215010 | Protector Unit ICP-1A |
| Δ Q803 | FU10215010 | Protector Unit ICP-1A |
| Δ Q804 | FU10215010 | Protector Unit ICP-1A |
| QK01 | HT327852B0 | Transistor 2SC2785(J, H) |
| QK02 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QK03 | HT327852B0 | Transistor 2SC2785(J, H) |
| QK04 | HT327852B0 | Transistor 2SC2785(J, H) |
| QK05 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QS01 | HC10110030 | IC LC7815H |
| QS02 | HC406603C0 | IC LC4066B-H |
| J401 | YL01010110 | Terminal, Earth |
| J701 | YT03080020 | Terminal, Speaker |
| J703 | YL01010110 | Terminal, Earth |
| JV01 | YT02040500 | Terminal, RCA Jack; 4P |
| JV02 | YT02040500 | Terminal, RCA Jack; 4P |
| JV03 | YT02040500 | Terminal, RCA Jack; 4P |
| L701 | LL23905120 | Coil, 1μH |
| L702 | LL23905120 | Coil, 1μH |
| W701 | YU02220260 | Jumper Lead, 2P |
| W703 | YU03140260 | Jumper Lead, 3P |
| W704 | YU04140260 | Jumper Lead, 4P |
| PE01 | YK292H1620 ZZ292H8620 | PE01-VOLUME CIRCUIT BOARD P.W. Board, Volume P.W. Board Assembly |

| REF. DESIG. | PART NO. | DESCRIPTION |
|-------------|------------|--|
| RE01 | RM01040840 | PE01-RESISTORS 100KΩ(B), Variable; Main |
| RE02 | RX02040080 | 200KΩ(W), Variable; Balance |
| RE23 | RS02540150 | 250KΩ(W), Variable; GEQ VR |
| RE24 | RS02540150 | 250KΩ(W), Variable; GEQ VR |
| RE25 | RS02540150 | 250KΩ(W), Variable; GEQ VR |
| RE26 | RS02540150 | 250KΩ(W), Variable; GEQ VR |
| RE27 | RS02540150 | 250KΩ(W), Variable; GEQ VR |
| Δ RY11 | GG05390140 | 39Ω ±5% ¼W |
| Δ RY12 | GG05390140 | 39Ω ±5% ¼W |
| QE01 | HC10021090 | PE01-SEMICONDUCTORS IC 4560D-D |
| QE02 | HC10052210 | IC BA3812L |
| QE03 | HC10052210 | IC BA3812L |
| QY01 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QY02 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QY03 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QY04 | HT109331Q0 | Transistor 2SA933SP(Q) |
| QY05 | HT109331Q0 | Transistor 2SA933SP(Q) |
| SE01 | SP02011090 | PE01-MISCELLANEOUS Push Switch, Loudness ON/OFF |
| SE02 | SP02011090 | Push Switch, Filter ON/OFF |
| SY01 | SP01010840 | Push Switch, Tact; CD |
| SY02 | SP01010840 | Push Switch, Tact; Phono |
| SY03 | SP01010840 | Push Switch, Tact; Tuner |
| SY04 | SP01010840 | Push Switch, Tact; Video/AUX |
| SY05 | SP01010840 | Push Switch, Tact; Tape Monitor |
| VY01 | IN10080620 | Lamp 50mA 8V, Tuner |
| VY02 | IN10080620 | Lamp 50mA 8V, CD |
| VY03 | IN10080620 | Lamp 50mA 8V, Video/AUX |
| VY04 | IN10080620 | Lamp 50mA 8V, Phono |
| VY05 | IN10080620 | Lamp 50mA 8V, Tape Monitor |
| WE01 | YU03160260 | Jumper Lead, 3P |
| WY02 | YU07160260 | Jumper Lead, 7P |
| WY03 | YU08160260 | Jumper Lead, 8P |

•(N): for Europe
•(E): for Europe
•(A): for Australia

| REF. DESIG. | PART NO. | DESCRIPTION |
|----------------|--------------------------|---|
| PN01 | YK292H1650 ZZ292H8650 | PN01-SPEAKER SWITCH CIRCUIT BOARD P.W. Board, Speaker Switch P.W. Board Assembly |
| SN01 | SP04020440 | Push Switch, Speaker |
| WN01 | YU03120260 | Jumper Lead, 3P |
| PP01 | YK292H1630 ZZ292H8630 | PP01-POWER SWITCH CIRCUIT BOARD P.W. Board, Power Switch P.W. Board Assembly |
| △ G001 | DK18103840 | Ceramic Cap. 0.01μF 250V |
| △ S001 | SP01010650 | Push Switch, Power |
| PW01 | YK292H1640 ZZ292H8640 | PW01-HEADPHONE JACK CIRCUIT BOARD P.W. Board, Headphone Jack P.W. Board Assembly |
| RW01 | GA05331010 | Resistor 330Ω ±5% 1W |
| RW02 | GA05331010 | Resistor 330Ω ±5% 1W |
| JW01 | YJ01001790 | Jack, Headphone |
| PX01 | YK292H1660 ZZ292H8660 | PX01-SPEAKER LAMP CIRCUIT BOARD P.W. Board, Speaker Lamp P.W. Board Assembly |
| △ RX01 | GG05390140 | Resistor 39Ω ±5% ¼W |
| △ RX02 | GG05390140 | Resistor 39Ω ±5% ¼W |
| VX01 | IN10080620 | Lamp 50mA 8V, Speaker 1 |
| VX02 | IN10080620 | Lamp 50mA 8V, Speaker 2 |

| | |
|----------|---------------------|
| (W01-99) | Assembly and Wiring |
| (T01-99) | Adjustment |
| (X01-00) | Correction |

NOTE ON SAFETY :

Symbol △ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol △. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

8. TECHNICAL SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT PER CHANNEL

| | |
|---|-------|
| DIN 4 OHMS | 50 W |
| RMS 4 OHMS | 40 W |
| DIN 8 OHMS | 50 W |
| RMS 8 OHMS | 40 W |
| TOTAL HARMONIC DISTORTION AT RMS 8 OHMS | 0.05% |
| I.M. DISTORTION | 0.05% |
| DAMPING FACTOR 8 OHMS (1 kHz) | 55 |

MM CARTRIDGE INPUT

| | |
|---|-----------|
| Frequency Response (RIAA) 20 Hz – 20 kHz) | ±0.5 dB |
| Signal-to-Noise Ratio | 72 dB |
| Input Impedance | 47 k ohms |
| Input Capacitance | 100 pF |
| Input Sensitivity | 2.5 mV |

AUX. INPUT

| | |
|----------------------------|----------------|
| Input Impedance | 25 k ohms |
| Input Sensitivity | 150 mV |
| Frequency Response (±2 dB) | 10 Hz – 50 kHz |
| Signal-to-Noise Ratio | 92 dB |

OUTPUT VOLTAGE

| | |
|--------------------------|--------|
| Tape Out (Input 7.75 mV) | 417 mV |
|--------------------------|--------|

OUTPUT IMPEDANCE

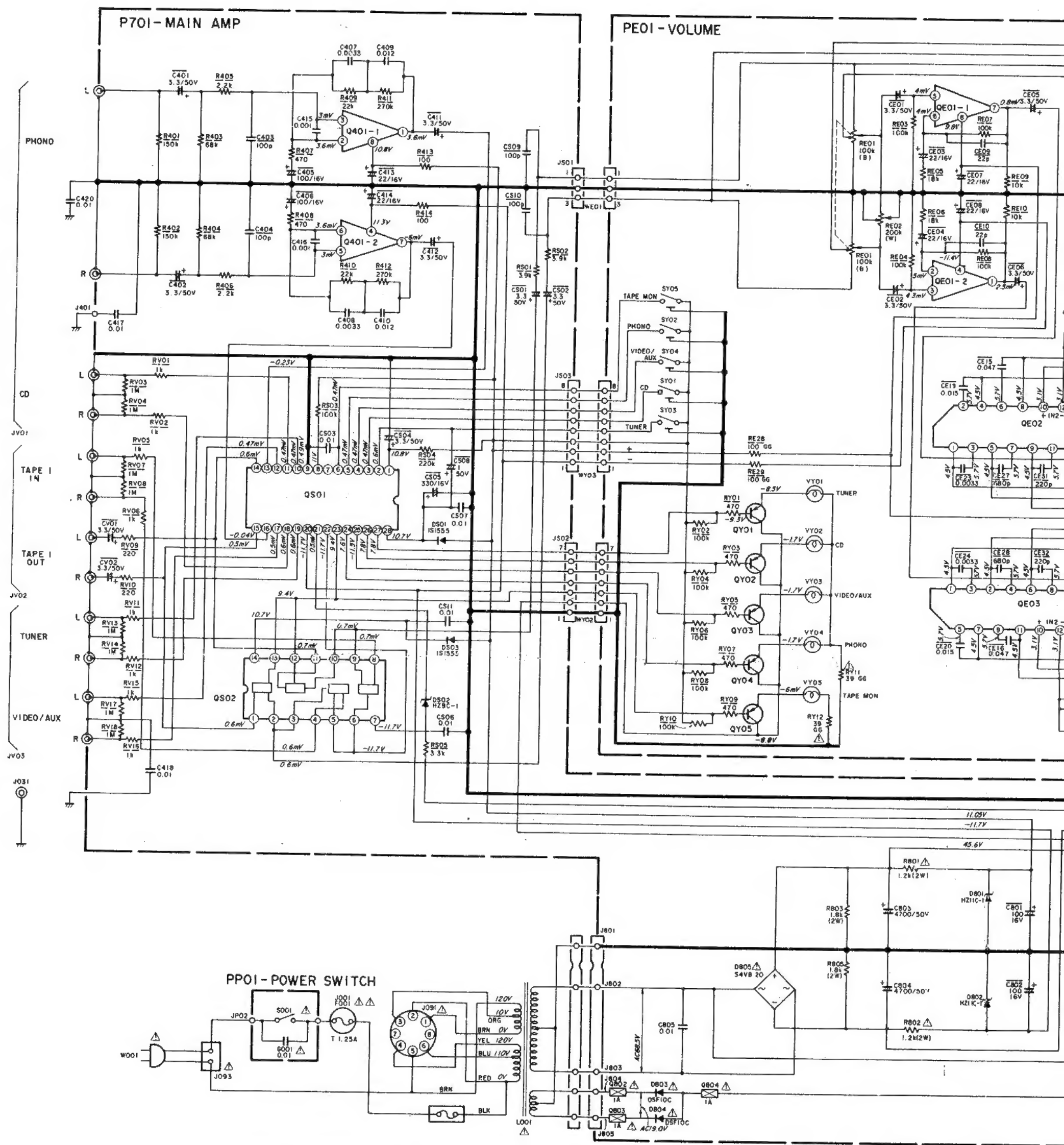
| | |
|----------|----------|
| Tape Out | 300 ohms |
|----------|----------|

GENERAL

| | |
|--|-------------------------------|
| Power Requirements | 110/120/220/240V AC, 50/60 Hz |
| Power Consumption at Rated Output, both Channels Operating | 200 W |
| Dimensions | |
| Panel Width | 416 mm |
| Panel Height | 85 mm |
| Depth | 225 mm |
| Weight | |
| Unit Alone | 5.0 kg |

Specifications and appearance are subject to change for modification without notice.

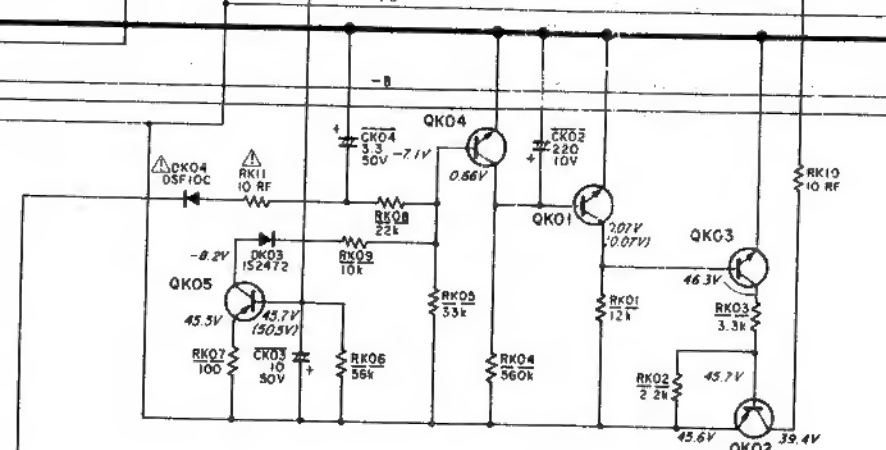
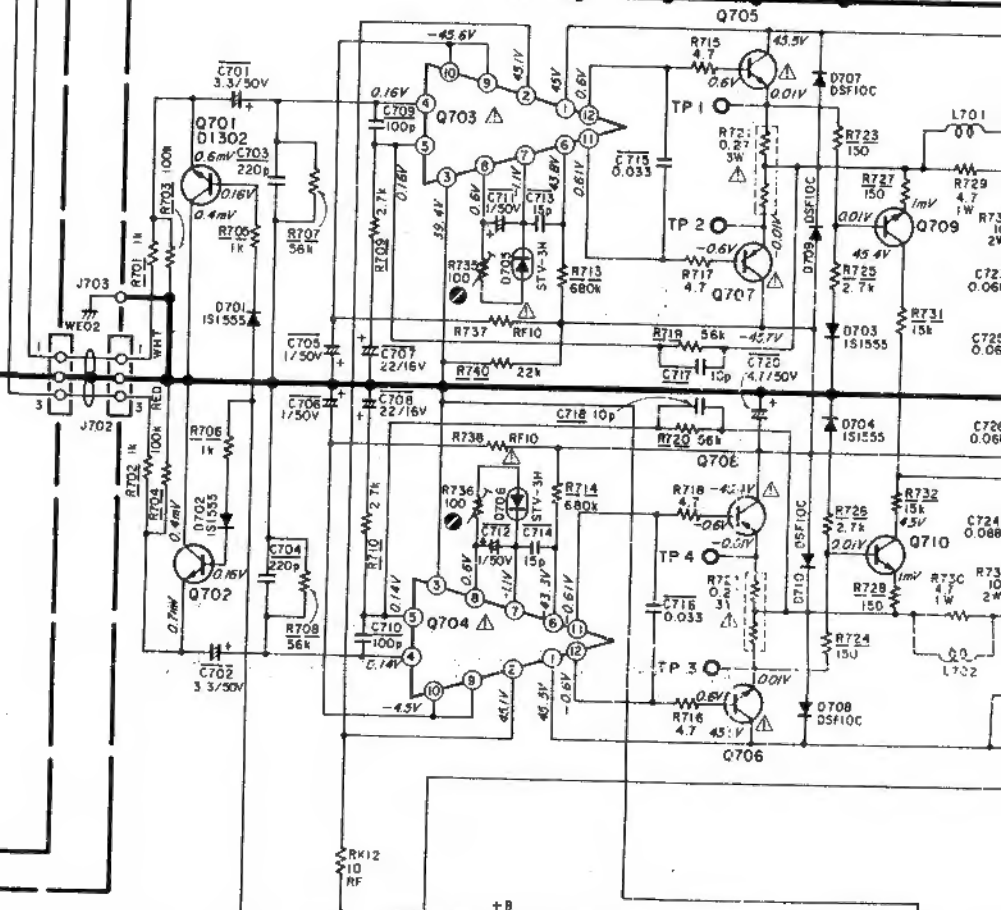
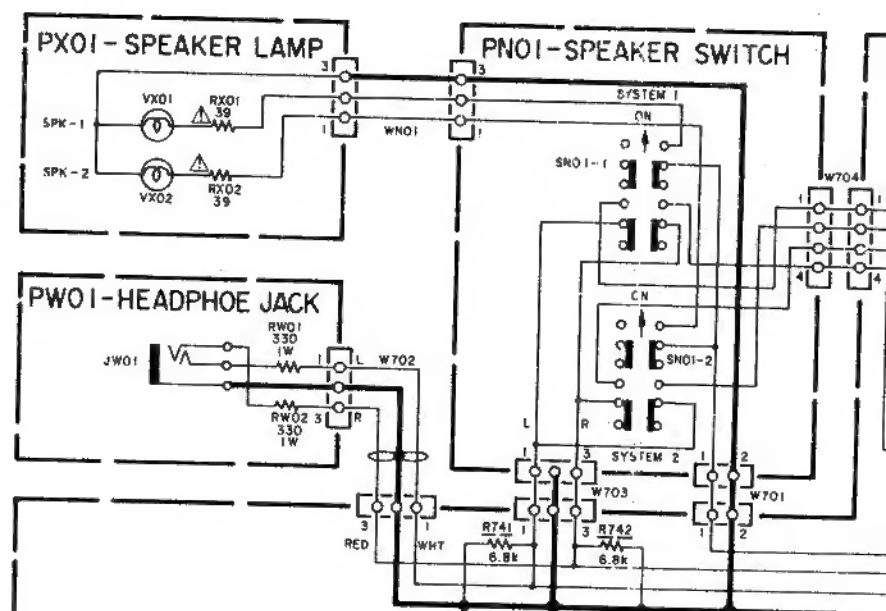
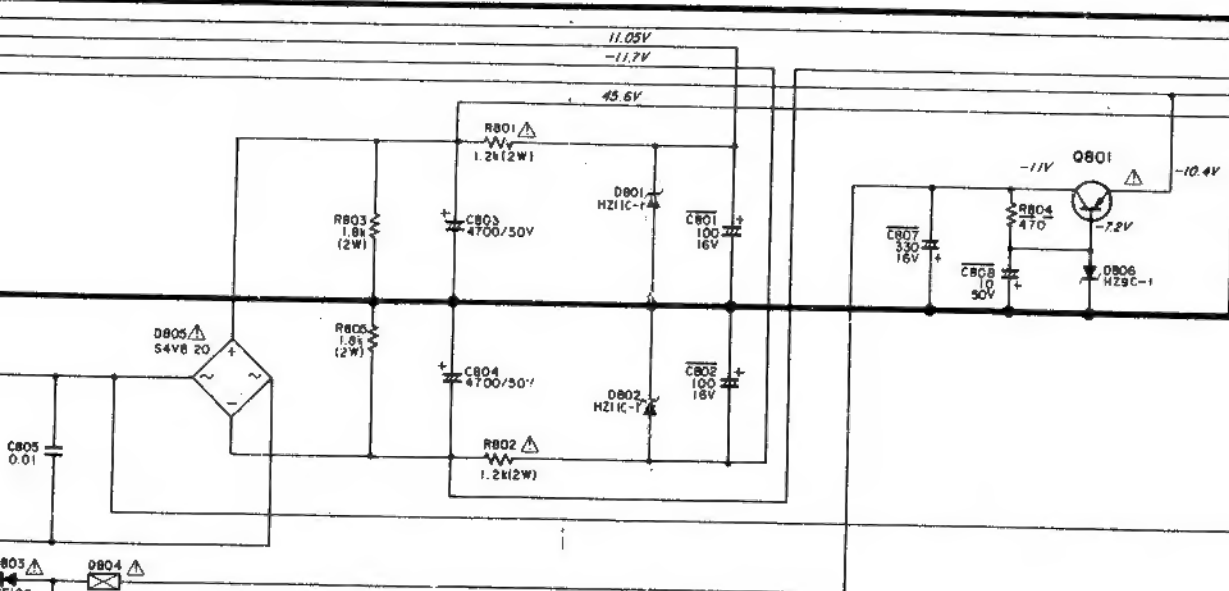
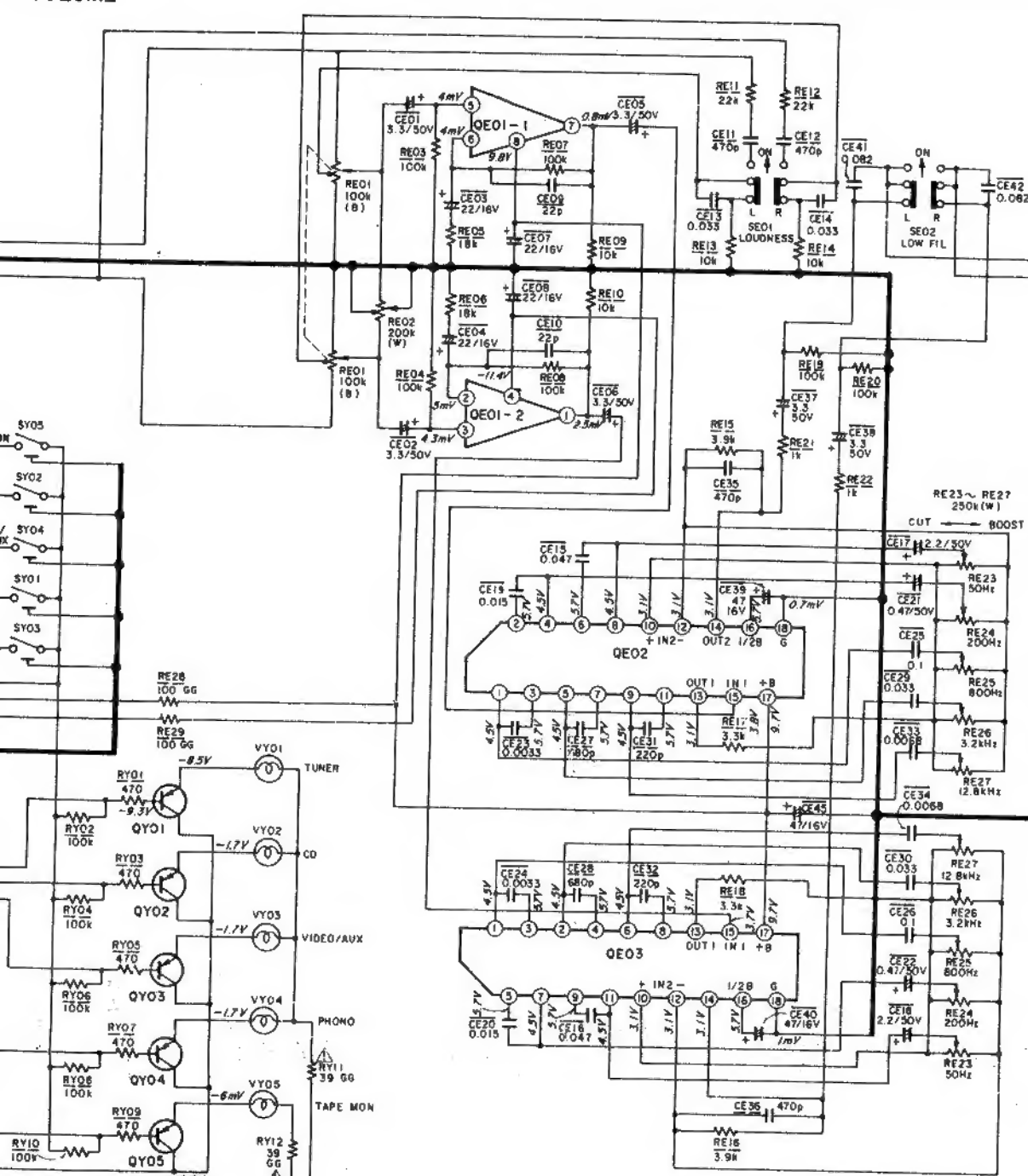
9. SCHEMATIC DIAGRAM



| | | | | | |
|------|------------|---------------------|------|------------|--------------------------|
| F001 | FS10125800 | FUSE 1.25A | VX01 | IN10080620 | LAMP 8V 50mA |
| G001 | DK18103840 | CERAMIC 0.01μF | VX02 | IN10080620 | LAMP 8V 50mA |
| J001 | YJ08000290 | JACK FUSE HOLDER | JW01 | YT02040500 | TERMINAL RCA JACK |
| J091 | BY05080050 | VOLTAGE SELECTOR | JV03 | | |
| J093 | YP04000580 | PLUG AC INLET | VY01 | | |
| L001 | TS17629010 | POWER TRANSFORMER | | IN10080620 | LAMP 8V 50mA |
| S001 | SP01010650 | PUSH SWITCH POWER | VY05 | | |
| W001 | ZC02006020 | AC POWER CORD (A) | RE01 | RM01040840 | VARIABLE MAIN VOL. 100kΩ |
| W001 | ZC01805010 | AC POWER CORD (N) | RE02 | RX02040080 | VARIABLE BALANCE 200kΩ |
| JW01 | YJ01001790 | JACK HEADPHONE | RE23 | | |
| J701 | YT03080020 | TERMINAL SPEAKER | | R502540150 | VARIABLE G. EQ. 250kΩ |
| L701 | LL23905120 | COIL 1mH | RE27 | | |
| L702 | LL23905120 | COIL 1mH | SE01 | SP02011090 | PUSH SWITCH LOUDNESS |
| R735 | RA01010600 | TRIMMING 100Ω | SE02 | SP02011090 | PUSH SWITCH LOW FILTER |
| R736 | RA01010600 | TRIMMING 100Ω | | | |
| SN01 | SP04020440 | PUSH SWITCH SPEAKER | | | |

NOTE ON SAFETY :
Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

Components and wiring are subject to change



Kind of Common Parts

RESISTOR

- R***** (1) GD05 --- 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
R*** (2) GD05 --- 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

C*** : CERAMIC CAP.

- (1) DD1 - - - 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 ~ N1000 50V

C*** : CERAMIC CAP.

- (1) DK16 --- 300, High dielectric constant ceramic condenser,
disc type (titan variable)
Temp. chara. 2B4 50V

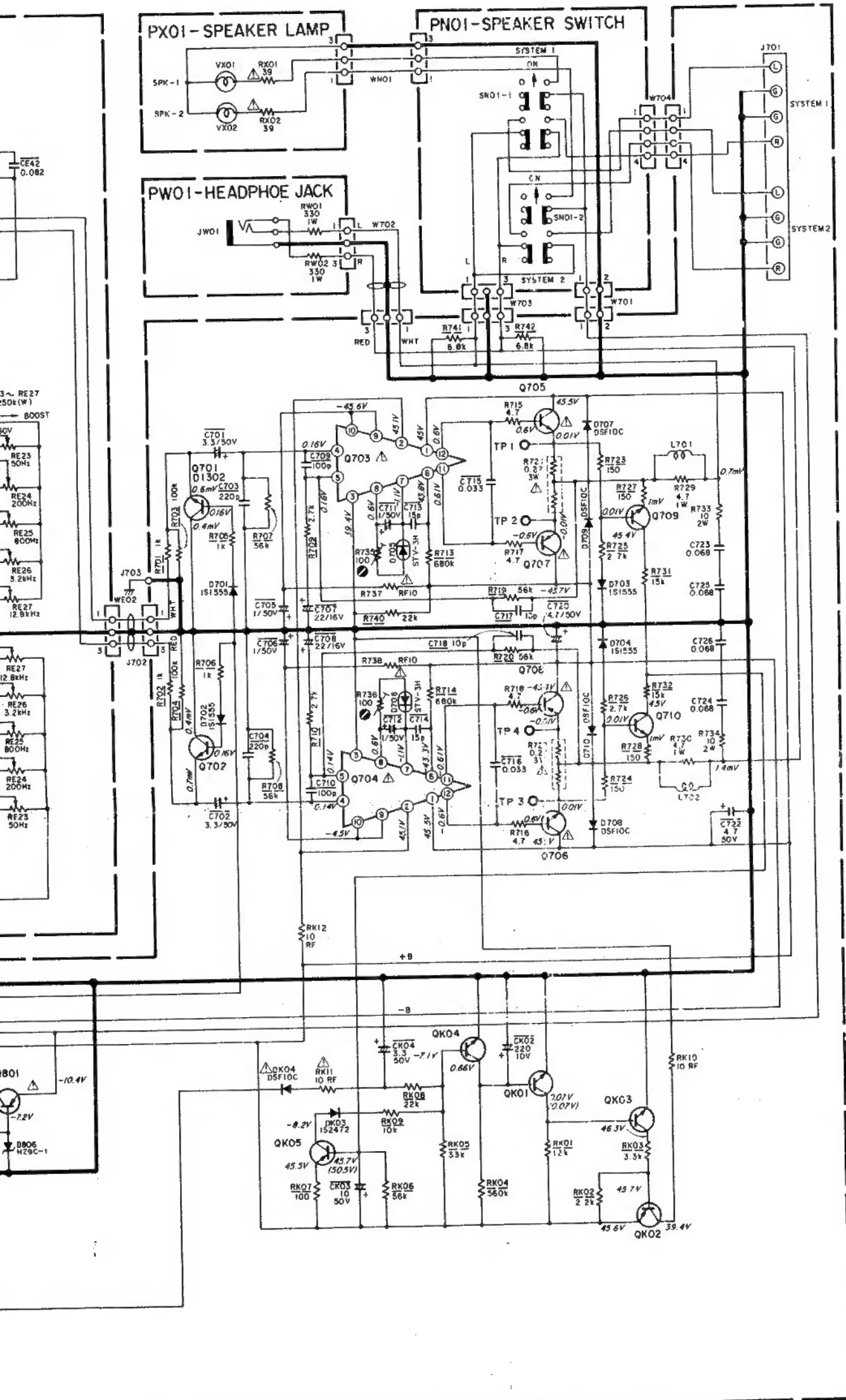
C*** : ELECTROLY

- (1) EA - - - - - 10

*In case of ordering the parts number of 10 fig.
COMMON PARTS CODE

16

Model PM251



Q401
HC10008090
4558DD

Q701, Q702
HT41302280
2SD1302(S,T)

Q703, Q704
HC10097060
μPC-1270H

Q705, Q706
HT331812A0
2SC3181(R,O)

Q707, Q708
HT112642A0
2SA1264(R,O)

Q709, Q710
HT327851F0
2SC2785(J,H)

Q801
HT206472F0
2SB647(C,D)

Q802, Q803, Q804
FUI0215010
ICP 1A

QE01
HC10021090
4560D-D

QE02, QE03
HC10052210
BA3812L

QK01, QK03, QK04
HT327852B0
2SC2785(J,H)

QK02, QK05,
QY01~QY05
HT103331Q0
2SA933SP(Q)

QS01
HC10110030
LC7815H

QS02
HC406603C0
LC4066B-H

D701~D704
DS01, DS03
HD20001000
1S1555

D705, D706
HV00009080

D803, D804, DK04
D707~D710
HD20022030
DSF-10C

D801, D802
HD30038010
HZ11C-1L

D805
HD20008290
S4VB-20

D806, DS02
HD30045010
HZ9C-1L

DK03
HD20002210
1S2472

"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY -
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE -"

Kind of Common Parts

RESISTOR

- R*** (1) GD05 --- 140, Carbon film fixed resistor, ±5% 1/4W
R*** (2) GD05 --- 160, Carbon film fixed resistor, ±5% 1/6W

C*** : CERAMIC CAP.

- (1) DD1 --- 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 ~ N1000 50V

C*** : CERAMIC CAP.

- (1) DK16 --- 300, High dielectric constant ceramic condenser,
disc type (titan variable)
Temp. chara. 2B4 50V

C*** : ELECTROLY CAP. (≡) / FILM CAP. (≡)

- (1) EA --- 10, Electrolytic condenser,
one-way lead type, tolerance ±20%
(2) DF15 --- 350, Plastic film condenser,
one-way type, Mylar, ±5% 50V

*In case of ordering the common parts, please establish the correct
parts number of 10 figures by the procedure "ASSIGNMENT OF
COMMON PARTS CODES"